REMARKS:

Claims 14-24 are pending. Claims 1-13 have been deleted. Support for new claims 14-24 is found, *inter alia*, in originally filed claim 13 and the specification on page 9, line 5, to page 11, line 17, page 12, line 15, to page 13, line 14, and page 16, line 1, to page 19, line 12. The Summary Of The Invention has been amended to reflect new claims 14-24. Also, the Abstract has been amended to reflect new claim 24. No new matter has been added. Action on the merits of this application as amended is respectfully requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6700 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,

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Date: March 1, 2002

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Version with markings to show changes made:

In the specification:

Page 3, line 22, through page 7, line 19:

[DISCLOSURE]SUMMARY OF THE INVENTION

[The invention achieving the first object is an electroluminescent element provided with layers of electroluminescent material interposed between anodes and cathodes, characterized in that it comprises: an anode group formed by parallel arrangement of a plurality of anodes; a bank group formed by parallel arrangement of banks intersecting with the anode group and having a height which prevents outflow of the electroluminescent material introduced during manufacture; electroluminescent material layers formed inbetween the banks; and a cathode group wherein cathodes running in the longitudinal direction of the electroluminescent material layers are provided on the electroluminescent material layers and are separated electrically for each of the electroluminescent material layers by means of the banks. By adopting a structure which is partitioned by banks, the electroluminescent material layers can be manufactured readily by introducing a liquid of electroluminescent material, and cathode formation can also be carried out in a single operation. Here, the cathodes are formed in a continuous fashion over a side face of the banks facing in a prescribed direction, the top face of the banks, and the electroluminescent material layers. By adopting this structure, patterning of the cathodes is carried out simultaneously with vapour deposition of the cathodes by making use of the shadow of the banks. Therefore, it is possible to carry out patterning of cathodes formed on organic films which are delicate with respect to processing.

Moreover, the angle formed between at least one side face of the banks and the face on which the banks are installed is an acute angle. By adopting this structure, the cathodes can be formed separately by depositing cathode material from a single direction, and the reliability of patterning can be improved. Moreover, a uniform

distance can be maintained between the banks. Thereby, it becomes easier to hit desired pixels when a liquid of electroluminescent material is injected by means of an ink-jet head, for example.

Furthermore, the angle formed between at least one side face of the banks and top face thereof is an acute angle. By adopting this structure, since regions where no cathode material is deposited are generated by the shadow of the banks, the separation of the cathodes is carried out automatically and reliably, and the reliability of patterning can be increased.

Furthermore, the electroluminescent material layers are constituted by light-emitting layers and/or charge transporting layers. The charge transporting layers may be hole injecting and transporting layers or electron injecting and transporting layers. Here, the light-emitting layers emitting light in each of the primary colours for the purpose of providing a colour display are arranged sequentially.

Moreover, in the present invention, each of the anodes constituting the anode group and each of the cathodes constituting the cathode group are connected individually, means being provided for conducting simple matrix driving of the electroluminescent element. By means of this structure, it becomes possible to drive the electroluminescent element by time division, thereby providing an inexpensive, high-capacity, colour electroluminescent element.

The invention for achieving the second object is a method for manufacturing an electroluminescent element provided with layers of electroluminescent material interposed between anodes and cathodes, characterized in that it comprises the steps of: forming an anode group by parallel arrangement of a plurality of anodes on a substrate; forming a bank group by parallel arrangement of banks intersecting with the anode group and having a height which prevents outflow of the electroluminescent material in an electroluminescent material forming step; forming electroluminescent material layers by introducing a liquid of the electroluminescent material inbetween the banks; and forming a cathode group wherein cathodes are electrically separated by means of the banks, by depositing

cathode material onto the electroluminescent material layers from a direction which forms a prescribed angle with the longitudinal direction of the banks. By means of these steps, it is possible to form the electroluminescent material layers at normal pressure whilst separating them by means of the banks, without requiring vacuum batch processing involving vapour deposition, or the like.

Moreover, the cathodes can be patterned very finely into thin rectangular shapes for the purpose of simple matrix driving. Here, the banks may be formed such that the angle between the side faces thereof and the face on which the banks are installed is a right angle, the cathode group being formed by depositing cathode material by oblique vapour deposition from a direction confronting the side faces, or a direction perpendicular to the vertical direction of the banks. By this means, cathode patterning is completed simultaneously with cathode vapour deposition, making use of the shadow of the banks. Therefore, it is possible to carry out patterning of cathodes formed on organic films which are delicate with respect to processing.

Moreover, the banks may be formed such that the angle between at least one side face of the banks and the face on which the banks are installed is an acute angle, the cathode group being formed by depositing cathode material by oblique vapour deposition from a direction confronting the one side face or the vertical direction of the banks. Thereby, the reliability of cathode patterning can be increased and the distance between banks can be kept the same as cases where the banks have a rectangular shape, and therefore it becomes easier to hit desired pixels when film material is injected by means of an ink-jet head, or the like.

Moreover, the banks may be formed such that the angle between at least one side face of the banks and the top face thereof is an acute angle, the cathode group being formed by vapour deposition from the vertical direction of the banks. By this means, it is possible to increase the reliability of cathode patterning.

Furthermore, non-glare treatment and/or antireflection treatment may be carried out on the surface of the electroluminescent element. By this means, it is possible to improve contrast in the electroluminescent element when used in bright

locations.] An embodiment of the invention is a method for manufacturing an electroluminescent element. The method includes forming a first electrode group by a predetermined arrangement of a plurality of first electrodes on a substrate, forming a bank group by a predetermined arrangement of a plurality of banks intersecting with the first electrode group, forming an electroluminscent material layer by filing the electroluminescent material in between banks by means of an ink-jet method, and forming a second electrode group separated by the banks by depositing a second electrode material onto the electroluminescent material layer. In another embodiment, the predetermined arrangement is a parallel arrangement. In yet another embodiment, the predetermined arrangement is a line arrangement.

Embodiments may have banks formed such that an angle between side faces thereof and a face on which the banks are installed is a right angle, and the second electrode group is formed by depositing the second electrode material by oblique vapor deposition from a direction confronting the side faces, or a direction perpendicular to the vertical direction of the banks. Also, embodiments may have banks formed such that an angle between at least one side face of the banks and a face on which the banks are installed is an acute angle, and the second electrode group is formed by depositing the second electrode material by oblique vapor deposition from a direction confronting the side face or a vertical direction of the banks. In addition, embodiments may have banks formed such that an angle between at least one side face of the banks and a top face thereof is an acute angle, and the second electrode group is formed by vapor deposition from a vertical direction of the banks. Furthermore, embodiments may include non-glare treatment and/or antireflection treatment carried out on a surface of the electroluminescent element.

Page 9, line 4:

[BEST MODE FOR CARRYING OUT]DETAILED DESCRIPTION OF THE INVENTION